



National Transportation Safety Board Aviation Accident Data Summary

Location:	ORLAND, CA	Accident Number:	LAX99LA188
Date & Time:	05/21/1999, 1725 PDT	Registration:	N8153Q
Aircraft:	Cessna 414	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

The pilot refueled the auxiliary tanks of the airplane at a different airport 1 month prior to the accident, and had not flown on the auxiliary tanks since that time. He was repositioning the airplane back to home base after a series of revenue flights when the accident occurred. About 20 minutes after takeoff he positioned the left and right engines to their respective auxiliary fuel tanks, and then returned to the mains 30 minutes later. The right engine began to surge and subsequently stopped running. Turning on the fuel boost pump restarted the engine. Five minutes later the engine quit and he secured it after unsuccessful restart attempts. Then the left engine began to surge and was developing only partial power. He diverted to an alternate airport with decaying altitude and power in the remaining engine. Crossing the airport, he saw he was too high to land with a tailwind so he circled to land into the wind. On the base leg he made the decision to land straight ahead in a field due to power lines in his path, rapidly decaying altitude, and power. During the landing roll, the airplane collided with a ditch. The left and right main fuel filters contained a foreign substance, which upon laboratory examination, was found to be a polyacrylamide. This is a manmade synthetic polymer that is used as an agricultural soil amendment that aids in reducing soil erosion. Distribution of the polymer is typically not done by aircraft. Inspection of the fueling facility revealed that the employees who do refueling did not have any formal or on-the-job training. There was no record that the delivery system filters had been examined or changed. The maintenance to the truck, delivery system, and storage facility are done by the employees on an as needed, time permitted basis. The fuel truck was found to be improperly labeled, and the fuel nozzle was lying in a compartment amid dirt, gravel, and other contaminants with no caps or covers for protection.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power in both engines due to fuel contamination, which resulted from the fueling facilities improper quality control procedures.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE - NORMAL

Findings

1. 1 ENGINE - LOSS,TOTAL
2. 1 ENGINE - LOSS,PARTIAL
3. (C) FLUID,FUEL - CONTAMINATION,OTHER THAN WATER
4. (C) EQUIPMENT,OTHER - NOT MAINTAINED - AIRPORT PERSONNEL
5. (C) INADEQUATE QUALITY CONTROL - AIRPORT PERSONNEL

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
6. TERRAIN CONDITION - DITCH

Occurrence #4: GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings
7. LANDING GEAR, NOSE GEAR - OVERLOAD
8. LANDING GEAR, MAIN GEAR - OVERLOAD

Pilot Information

Certificate:	Airline Transport	Age:	58
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	12000 hours (Total, all aircraft), 480 hours (Total, this make and model), 10350 hours (Pilot In Command, all aircraft), 136 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8153Q
Model/Series:	414 414	Engines:	2 Reciprocating
Operator:	ROBERT SCOTT	Engine Manufacturer:	Continental
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	IO-520
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CIC, 238 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	18 knots / 27 knots, 300°
Temperature:		Visibility	50 Miles
Precipitation and Obscuration:			
Departure Point:	SAN JOSE, CA (RHV)	Destination:	REDDING, CA (RDD)

Airport Information

Airport:	HAIGH FIELD (O37)	Runway Surface Type:	Asphalt
Runway Used:	33	Runway Surface Condition:	
Runway Length/Width:	4500 ft / 60 ft		

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC):	TEALEYE C CORNEJO	Adopted Date:	11/22/2000
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.